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Why Manufacturing Matters to California

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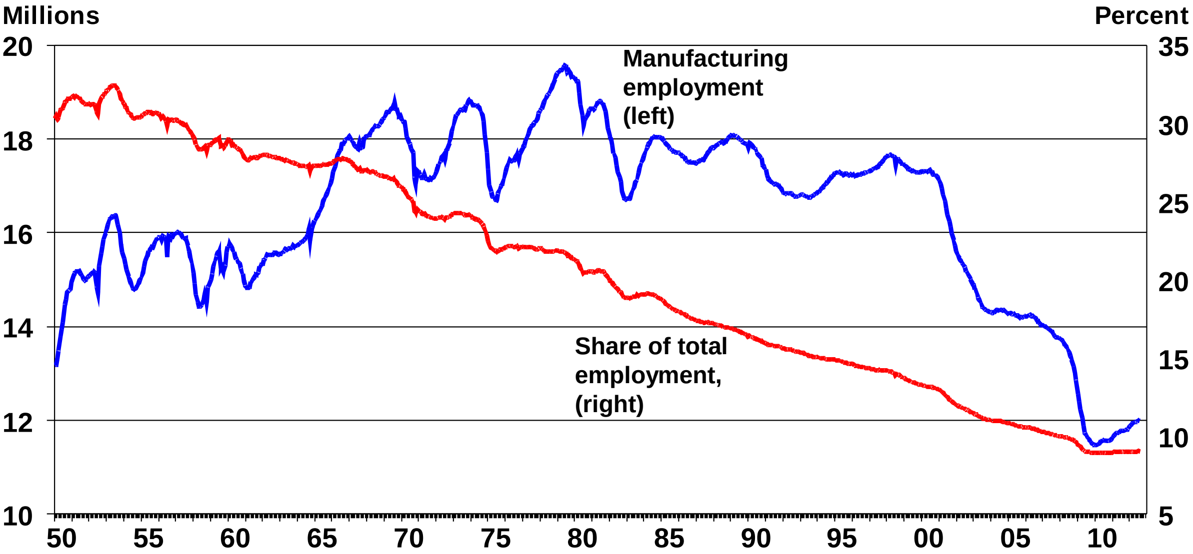
Designing for Impact III:
Workshop on Building the National Network for Manufacturing Innovation

The exodus of manufacturing over the years

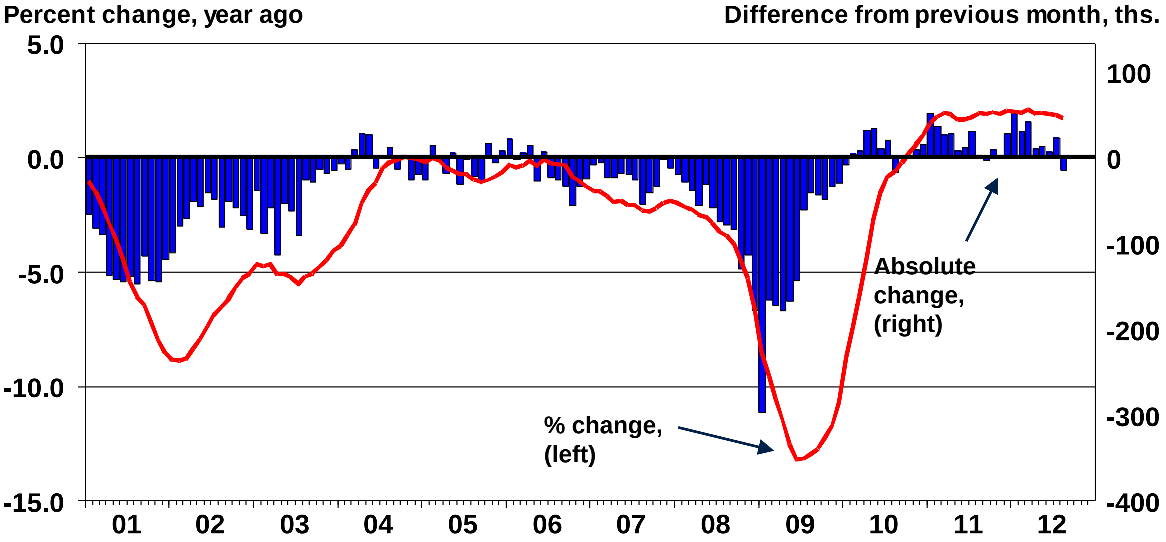
Manufacturing employment, United States



Sources: Bureau of Labor Statistics, IHS Global Insight.

Is a comeback in the works?

Manufacturing employment, United States



Sources: Bureau of Labor Statistics, IHS Global Insight.

Manufacturing productivity rises

GDP (real US$)

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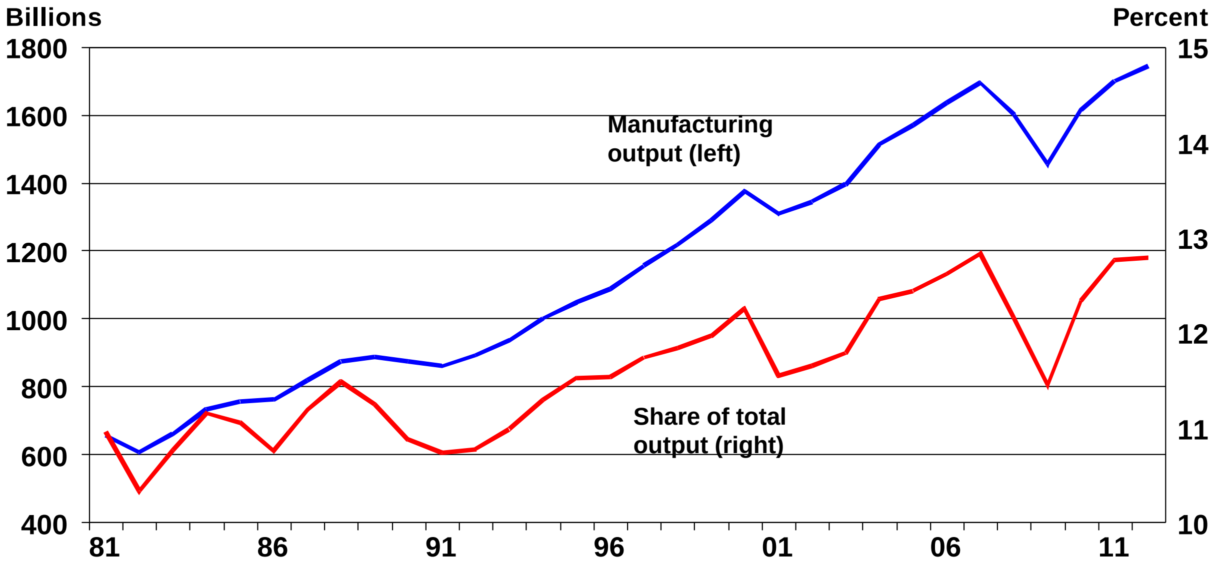
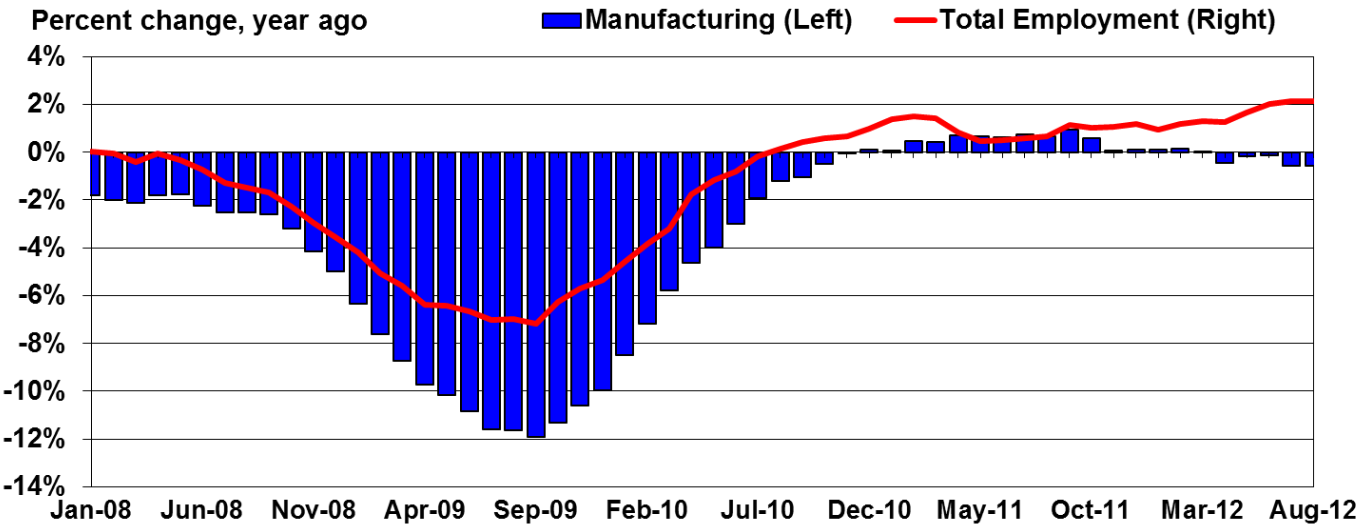


Sources: Bureau of Labor Statistics, IHS Global Insight.

California manufacturing employment



Source: U.S. Bureau of Labor Statistics.
Note: Seasonally adjusted

California manufacturing employment

Share of total employment

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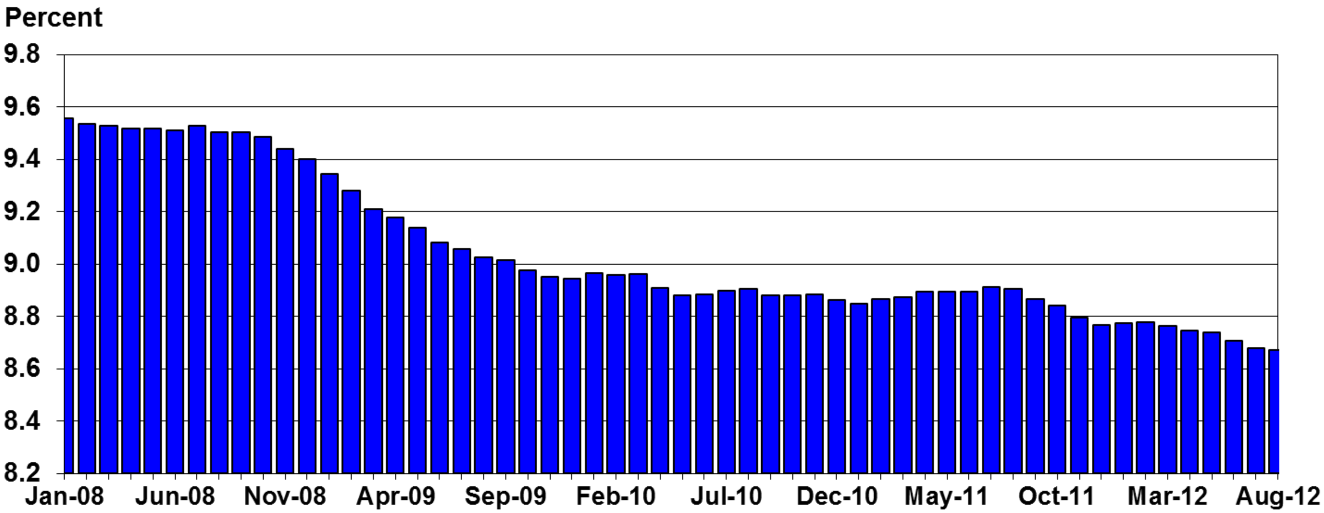

Source: U.S. Bureau of Labor Statistics.
Note: Seasonally adjusted

California's high-tech manufacturing fell by 40 percent since 1990

High-tech versus non high-tech

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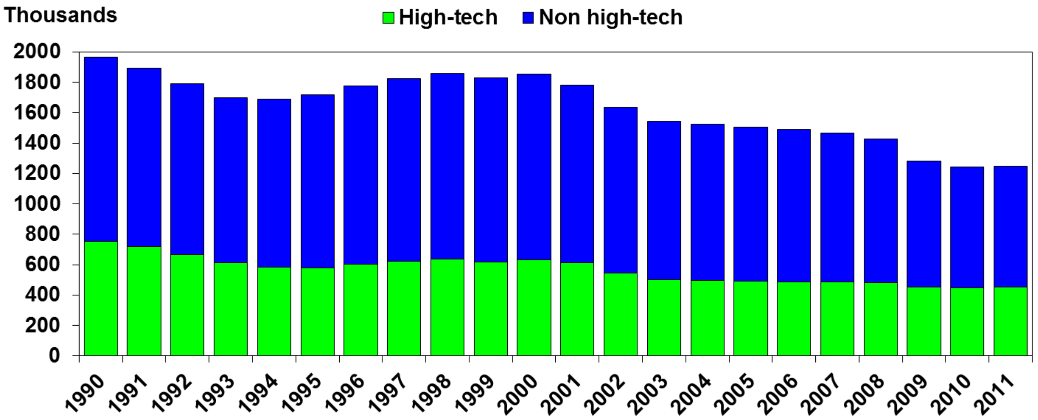

Total manufacturing

1990: 1,965,300
2011: 1,247,225

Net change: -718,075
% change: -36.5%

High-tech manufacturing

1990: 752,560
2011: 453,260

Net change: -299,300
% change: -39.8%

Sources: BLS, Moody's Economy.com, Milken Institute.

Note: Seasonally adjusted.

The State of California Manufacturing

Manufacturing versus social services

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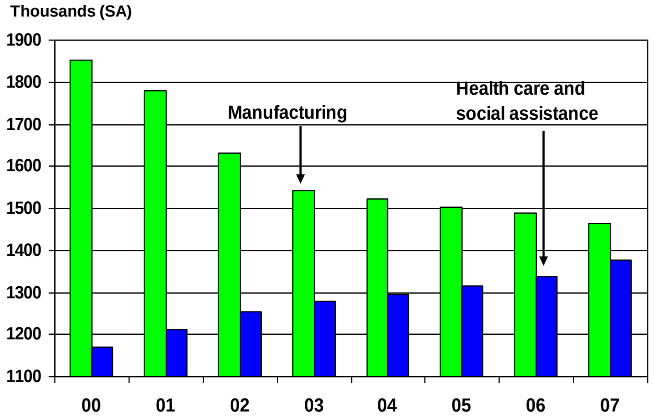
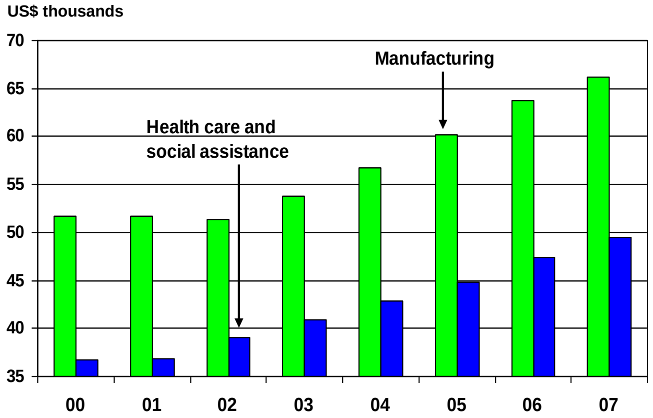
Employment



Wages



Sources: BLS, Moody's Economy.com, Milken Institute.

Manufacturing growth uneven across metros

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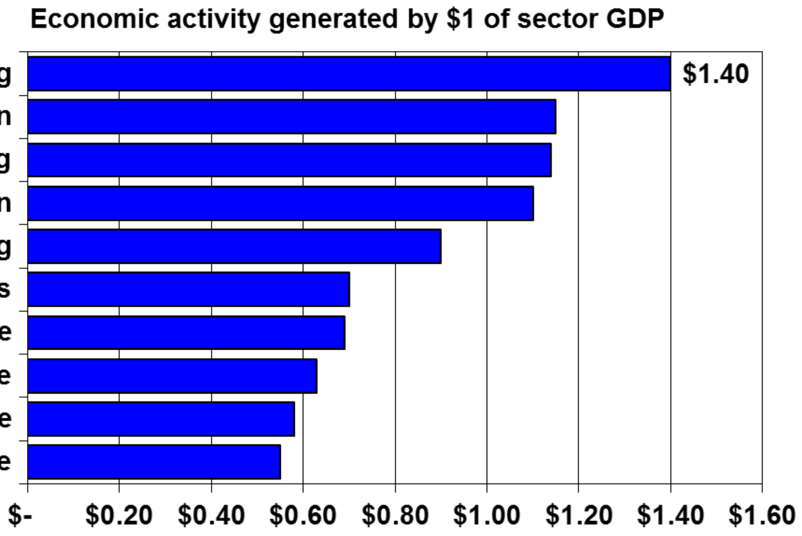
U.S., California, and select metros

Region	Manufacturing employment (000s) Aug-2012	Aug-2011	Aug-2010	Net change 12-mos	24-mos	Percent change 12-mos	24-mos
U.S.	12074	11874	11651	200.0	423.0	1.7%	3.6%
California	1259.9	1268.3	1258.8	-8.4	1.1	-0.7%	0.1%
San Francisco-Oakland-Fremont MSA	115.6	116.8	116.5	-1.2	-0.9	-1.0%	-0.8%
San Jose-Sunnyvale-Santa Clara MSA	164	162.2	156.2	1.8	7.8	1.1%	5.0%
Fresno MSA	26.1	25.3	25.6	0.8	0.5	3.2%	2.0%
Modesto MSA	23.2	22.4	24.8	0.8	-1.6	3.6%	-6.5%
Los Angeles-Long Beach-Glendale MD	360.1	365.2	374.4	-5.1	-14.3	-1.4%	-3.8%
Riverside-San Bernardino-Ontario MSA	87.4	87.2	85.6	0.2	1.8	0.2%	2.1%
San Diego-Carlsbad-San Marcos MSA	91.8	92.5	93.2	-0.7	-1.4	-0.8%	-1.5%

Source: U.S. Bureau of Labor Statistics.
Note: Not seasonally adjusted.

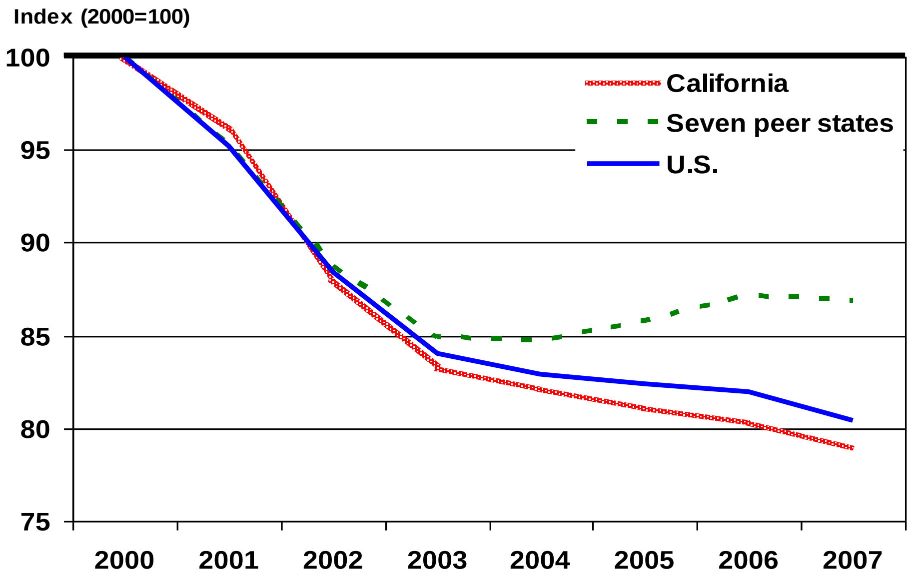
Additional economic activity by sector



Sources: The Facts about Modern Manufacturing: The Manufacturing Institute 8th edition, Bureau of Economic Analysis.

State Case Studies

Manufacturing employment since 2000



Note*:* The peer states include Arizona, Indiana, Kansas, Minnesota, Oregon, Texas, and Washington.

Sources: BLS, Moody's Economy.com, Milken Institute.

Why Manufacturing Matters

Retrospective simulation on California manufacturing

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	Hypothetical 2007 (assuming 2000 share)	Actual 2007	Net gain
Employment (thousands)	1,939	1,463	476
Earnings (US$ billions)	$124.2	$96.9	$27.3
Real output (US$ billions)	$216.0	$169.1	$46.9

Economic impacts of simulation to broader economy

	Multiplier	Direct impact	Indirect impact	Total impact
Employment (thousands)	3.5	476	1,174	1,650
Earnings (US$ billions)	2.8	$27.3	$47.8	$75.1
Real output (US$ billions)	2.2	$46.9	$54.3	$101.2

Sources: BLS, BEA, Moody's Economy.com, Milken Institute.

Growth of unit labor cost in manufacturing

U.S., Japan and Germany, 1990 to 2010

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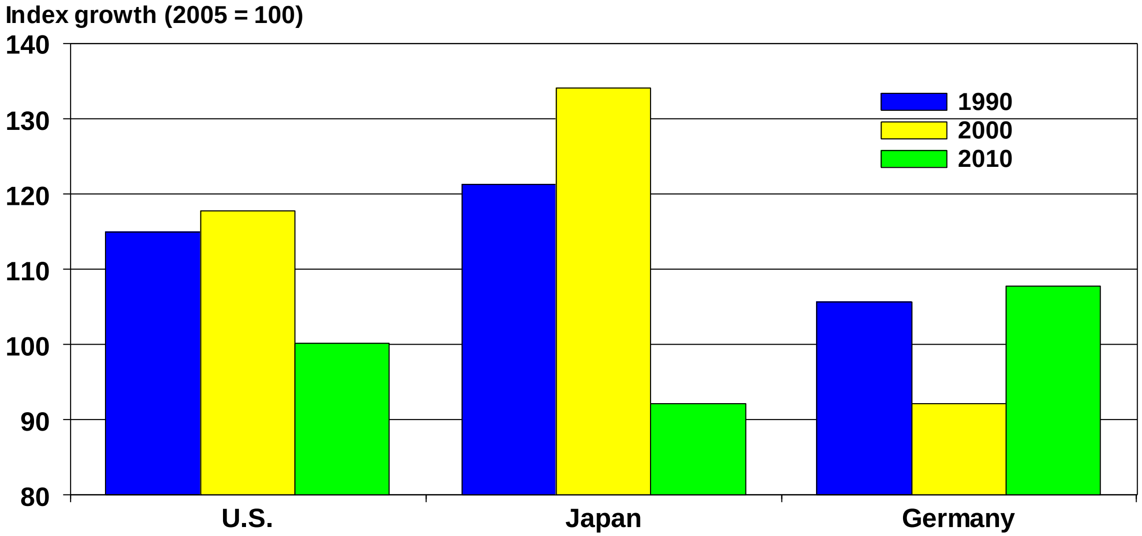

Source: OECD.

How strong will the manufacturing recovery be?

Top 10 expanding and contracting sectors through Q1 2015

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Rank	Sector	Workers to be added
1	Professional, scientific, technical and related support	2.07 million
2	Construction	1.87 million
3	Health care and social assistance	1.31 million
4	Transportation and warehousing	620,000
5	State and local government	471,000
6	Retail trade	449,000
7	Wholesale trade	442,000
8	Transportation equipment MFG	318,000
9	Wood products manufacturing	262,000
10	Accommodation and food services	225,000

Rank	Sector	Workers to be subtracted
1	Federal government	256,000
2	Educational services	213,000
3	Management of companies	137,000
4	Gasoline stations	116,000
5	Mining	89,000
6	Printing and related support	55,000
7	Utilities	34,000
8	Textile mills	22,000
9	Food and beverage stores	22,000
10	Publishing	16,000

Sources: Bureau of Labor Statistics, IHS Global Insight, Milken Institute.

Proposed policy implementation

Jobs for America

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Improving economic and tax policy

- **Reducing the U.S. corporate income tax rate to match the OECD average**
- **Increasing the R&D tax credit by 25 percent and making it permanent**
- **Modernizing U.S. export controls on commercially available technology products**

Turning Crisis into Opportunity

State manufacturing competitiveness

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1. **Leverage the economic crisis** to bring attention to the competitive challenges facing manufacturers and the promise of high-wage employment with a high multiplier effect to reboot the economy.
2. **Streamline regulations** for new facilities and those planning to expand as a method of accelerating job creation.
3. **Target tax incentives** to all manufacturers investing in new equipment, research and development and job creation and not just for those deemed to be "green".
4. **Direct workforce re-training** resources to preparing workers for manufacturing and help fill the skills gap impeding the industry's competitiveness.